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13. A dispensing apparatus for providing a continuous supply of fluid material comprising:

- a supply container, for containing a fluid material
- a pump having a fluid material inlet and outlet, said inlet being connected to said supply container for receiving the fluid material;
- said pump further including a casing having a fluid inlet and a fluid outlet;
- a rotatable impeller disposed in said casing, for conveying fluid material through said casing;
- a plurality of pressure plates encircling said impeller and defining an adjustable pressure space between said pressure plates and said impeller;
- a dispensing device connected to said pump outlet, said dispensing device having an outlet for dispensing said fluid material;
- a pressure sensor disposed in said dispensing device, for continuously sensing fluid material pressure in said dispensing device; and
- a processing device connected to said pressure sensor and to said pump, for continuously monitoring fluid pressure at said dispensing device and adjusting the fluid output of said pump in relation to said fluid pressure at said dispensing device.

14. The apparatus of claim 13, said pump further comprising

- adjusting means coupled to said pressure plates and said processing device, for adjusting the position of said pressure plates and adjusting head pressure of said pump.

15. The apparatus of claim 14, said adjusting means further comprising

- a pivot shaft extending axially from upper and lower ends of each of said pressure plates, said pivot shaft being pivotally mounted with said casing for pivotal movement of each of said pressure plates about a longitudinal axis of said pressure plates;
- at least one gear coupled to said pivot shaft of each of said pressure plates;
- a ring gear operatively coupled to each of said gears, for imparting simultaneous limited pivotal movement to said pressure plates about said longitudinal axis.

16. The apparatus of claim 15, further comprising drive means operatively coupled to said ring gear and to said processing device, for rotating said ring gear to adjust the position of said pressure plates.

17. The apparatus of claim 16, said drive means comprising

- a drive gear operatively coupled to said ring gear; and
- a drive motor coupled to said drive gear for operating said drive gear, said drive motor being coupled to and operated by said processing device.

18. The apparatus of claim 13, wherein said impeller comprises

- a helical gear having a substantially cylindrical body, an upper and lower axial face, and a plurality of helical teeth for conveying fluid material.

19. The apparatus of claim 18, further comprising

- at least one magnetic disk coupled to at least one of said axial faces of said impeller, said magnetic disk having a plurality of magnetized areas of alternating polarity disposed radially around said disk;
- a plurality of electromagnets disposed around said magnetic disk in a fixed position,

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a power source coupled to each of said electromagnets and to said processing device, said processing device including means for energizing said electromagnets to have alternating polarities and sequentially reversing the polarities of said electromagnets to cause rotation of said magnetic disk.

20. The apparatus of claim 13, wherein

each of said pressure plates are mounted for limited pivotal movement about a longitudinal axis parallel to an axis of rotation of said impeller.

21. The apparatus of claim 20, each of said pressure plates further comprising

an inner face having first and second curvilinear concave surfaces opposing said impeller, each said concave surface extending substantially the length of said inner face forming a longitudinal ridge on said inner face.

22. The apparatus of claims 21, wherein

said first concave surface has a first curvature of a first radius;

said second concave surface has a second curvature of a second radius, said second radius being longer than said first radius whereby said second concave surface has less curvature than said first curvature.

23. The apparatus of claim 21, wherein

said first concave surface has a first arcuate surface defined by an angle of about 18°; and

said second concave surface has a second arcuate surface defined by an angle of about 36°.

24. The apparatus of claim 20, each of said pressure plates comprising

an inner face having a first and second concave surface defining a frustoconical arc opposing said impeller, each of said surfaces being contiguous along a line extending substantially diagonally across said inner face.

25. The apparatus of claim 24,

said first concave surface comprising an arcuate surface defined by an angle of 18°; and

said second concave surface comprising an arcuate surface defined by an angle of about 36°.

26. The apparatus of claim 13, wherein said impeller has a substantially cylindrical outer face, and further comprises

a plurality of helical gear teeth extending from said outer face,

a first recessed area centrally disposed on an upper axial face of said impeller,

a plurality of first passageways extending radially outward from a lowermost portion of said first recessed area to said outer face,

a second recessed area centrally disposed on a lower axial face of said impeller, and

a plurality of second passageways extending radially inward from said outer face to an uppermost portion of said second recessed area.

27. The apparatus of claim 26, further comprising

a first conical member disposed in said first recessed area and extending axially from said impeller; and

a second conical member in said second recess and extending axially from said impeller.

28. The apparatus of claim 27, wherein

said first recessed area is positioned to receive fluid material from an inlet of said pump apparatus, and said second recessed area is positioned to discharge fluid material to an outlet of said pump apparatus.